

**DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMITTING and COMPLIANCE DIVISION
MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(MPDES)**

Statement of Basis

Permittee:	Rosebud Operating Services
Permit No.:	MT0030180
Receiving Water:	ExxonMobil storm water ditch
Facility Information:	
Name	Yellowstone Energy Limited Partnership
Operator	Rosebud Operating Services
Location	2215 North Frontage Road Billings, MT 59101
Facility Contact:	Tom Shaw, Operating Manager 2215 North Frontage Road Billings, MT 59101 406-256-5296 406-256-5317 (FAX)
Fee Information:	
Number of Outfalls	1 - (for fee determination)
Outfall – Type	Minor - Privately owned treatment works

I. Permit Status

The Department issued a Montana Pollutant Discharge Elimination System (MPDES) permit to Yellowstone Energy Limited Partnership (YELP) on November 20, 1995. The permit became effective December 1, 1995 and expired on October 31, 2000. YELP submitted a renewal application on May 5, 2000.

II. Facility Information

A. Facility Description

YELP is a 54 MW (megawatt) steam and electric generating plant that began operating in 1995. Rosebud Operating Services operates the plant for YELP so this permit will be issued to the operator instead of the facility. Petroleum coke from both the ExxonMobil (Exxon) and Conoco refineries in Billings is used for fuel; no coal is burned. The plant consists of two fluidized combustors. Electric power is sold to Northwestern Energy. Steam produced from the boiler is used to power the turbine generator and to provide steam to the Exxon refinery.

YELP receives water from the Exxon refinery. Exxon sends a minimum of 250 gallons per minute (gpm) and a maximum of 425 gpm of pre-treated raw water from the Yellowstone River to YELP. Exxon pre-treats the raw river water in a lime scrubber and zeolite softener so the pH of the water is approximately 9.0 s.u. Dissolved solids from the water softening process at the refinery are handled by Exxon. Using Yellowstone river water, YELP develops and returns to Exxon 40,000-140,000 pounds of steam per hour and 20-50 gpm of de-mineralized water each day.

The cooling system for cooling steam is air-cooled; the system for cooling equipment is water cooled. Typically steam electric power plants use large cooling towers to recirculate cooling water through a main condenser. Instead of using water to cool the main condenser, the YELP plant uses air to cool the main condenser, which eliminates a non-contact cooling tower discharge subject to Effluent Limitation Guidelines (ELGs) (see Section III -Technology-based Effluent Limitations). Cooling water referred to at the YELP plant is generated from the small "recirculating house service water system" as defined in 40 CFR 423.11(b). The recirculating house service water system discharges are called "low volume wastes" and are subject to the ELGs at 40 CFR 423.12(b)(3) (see Section III). The distinction between cooling tower discharges and the recirculating house service water system related to the YELP plant is further clarified in a November 2, 1995 letter and cooling schematic from Rosebud Operating Services to the Department (see Administrative File).

If Lockwood municipal water (chlorinated) is used in the summer months for additional makeup water, YELP uses sodium bisulfate to de-chlorinate the water before it enters

YELP's water treatment system because chlorine is corrosive in the boiler system and piping.

Wastewater is discharged in approximately 1,000 gallon daily batches to the Exxon storm drainage ditch located on the north perimeter of the YELP property (see Figure 2).

Wastewater discharged from the YELP plant to the Exxon storm water ditch includes these volumes: 50 gpm of over flow water from the recirculating house service wastewater system used to cool pumps, fans, air compressors and two heat exchangers, 5 gpm from water softeners, 10 gpm backwash water from the de-mineralizer (water softener) system, and 5 gpm from equipment wash down and floor drains (see Figure 1 - Average Water Flows for Yellowstone Power Plant).

Wastewater is contained in a 120,000-gallon storage tank so the pH and discharge rate of the wastewater can be controlled (pH adjusted). Approximately 70 gpm of wastewater is intermittently discharged at Outfall 001. The average discharge during the period of record (POR) described in Table 1 is 73 gpm.

Wastewater produced at YELP was originally hauled to a fly ash disposal site near Warren, Montana and used to hydrate the fly ash that is buried at Warren but this practice was discontinued when the MPDES permit was issued to YELP to discharge wastewater to the Yellowstone River (actual discharge location is the Exxon storm water ditch). Currently, fly ash transported to the Warren disposal site is hydrated with water produced from onsite wells. Hauling wastewater from the YELP plant to the Warren disposal site was permitted under Montana Ground Water Pollution Control System Permit MGWPCS-0061 that was issued to YELP on October 17, 1996. Wastewater is no longer hauled to the fly ash disposal site; it is discharged to the Exxon storm water ditch.

The facility maintains an Industrial Storm Water General Permit (MTR000364).

B. Effluent Characteristics

Table 1 summarizes monthly self-monitoring effluent data for flow, total dissolved solids (TDS), total suspended solids (TSS), pH and oil and grease as reported by YELP during the POR January 2000 through December 2005.

Table 1: Effluent Characteristics for the POR January 2000 through December 2005.							
Parameter	Location	Units	Previous Permit Limit	Minimum Value	Maximum Value	Average Value	Number of Samples
Flow	Effluent	gpd	⁽¹⁾	10,570	134,810	104,882	71
TSS	Effluent	mg/L	30/100 ⁽²⁾	3.3	50.5	15.7	72
TDS	Effluent	mg/L	⁽¹⁾	630	4,134	2,226	72
Oil and Grease	Effluent	mg/L	10/15 ⁽²⁾	0	0	0	71
pH	Effluent	s.u.	6.0 - 9.0	6	9.4	--	71
Footnotes: gpd = gallons per day							
(1) No limit in previous permit; monitoring requirement only							
(2) 30-day average/instantaneous maximum							

One effluent sample that was analyzed and reported on the application included these parameters: flow = 70 gpm, BOD = <6 mg/L, COD = 29 mg/L, TOC = 9 mg/L, TSS = <10 mg/L, ammonia = 0.3 mg/L, temperature (winter) = 7° C, temperature (summer) = 24 °C, pH = 7.9, total chlorine residual = <0.1 mg/L, oil and grease = <1 mg/L and phosphorus = 1.17 mg/L.

Based on the document submitted with the previous MPDES application, "Application for Permit, Montana Pollution Discharge Elimination System Permit, Yellowstone Energy Limited Partnership Cogeneration Plant, Billings, Montana" (Mills 1995), "minor constituents of the wastewater stream will include residual treatment chemicals used in the plant". Nalco 23107 is used in the cooling water treatment and contains zinc and phosphate. Nalco 7208 is used in the boiler and contains phosphate. In addition, a wastewater sample taken from the Rosebud Power Plant in Colstrip which is similar to the YELP plant shows 0.03 mg/L of total recoverable copper in the wastewater (see Mills 1995 document), which is likely from copper plumbing in the plant.

C. Compliance History

YELP violated permit limits for TSS twice and once for pH during the POR. No other violations are noted during the POR.

III. Rationale for Proposed Technology-based Effluent Limits (TBELs)

A. Scope and Authority

The Montana Board of Environmental Review (BER) has adopted performance standards for point source discharges to state waters, under Title 17, Chapter 30, Subchapter 12. The Board has adopted by reference 40 CFR Subpart N which is a series of federal agency rules that adopt TBELs for existing sources and performance standards for new sources [Administrative Rules of Montana (ARM) 17.30.1207(1)]. National Effluent

Limitation Guidelines (ELG) have been promulgated under Subchapter N for discharges at this type of facility. ELGs for the Steam Electric Power Generating Point Source Category (40 CFR Part 423) for certain types of discharges are applicable to this facility.

In addition to Subchapter 12, the BER has adopted general treatment requirements that establish the degree of wastewater treatment required to maintain and restore the quality of state surface waters. This rule states that in addition to federal ELGs, the degree of wastewater treatment is based on the surface water quality standards; the state's nondegradation policy; the quality and flow of the receiving water; the quantity and quality of sewage, industrial wastes and other wastes to be treated; and the presence or absence of other sources of pollution on the watershed [ARM 17.30.635(1)]. Also, ARM 17.30.635(3) states industrial waste must receive, as a minimum, treatment equivalent to the best practicable control technology currently available (BPCTCA) as defined in 40 CFR Chapter 1, Subchapter N (July 1, 1991).

The Steam Electric Power Generating Point Source Category regulations apply to discharges from the YELP facility because it is an electric power plant. The facility produces "low volume waste sources". Low volume waste sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment system, water treatment evaporator blow down, laboratory and sampling streams, boiler blow down, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.

As stated in Section III, low volume wastes generated from the YELP plant include: cooling tower wastewater (from the house service water system) (50 gpm), equipment wash down water (5 gpm), water softeners (5 gpm), and backwash water from the de-mineralizer system (10 gpm).

B. Applicable Effluent Limitation Guidelines

ELGs [40 CFR Part 423.12 – best practicable control technology currently available (BPT)] applicable to discharges at YELP include:

1. For all wastewater discharges, the pH (except once through cooling water) shall be within the range of 6.0 - 9.0.
2. For all wastewater discharges, there shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
3. For low volume wastes, effluent limits are in Table 2.

Table 2. Effluent limits for low volume wastes

Pollutant or Pollutant Property	BPT Effluent Limits	
	Maximum for any Day (mg/L)	Average of Daily Values for 30 Consecutive Days Shall Not Exceed (mg/L)
TSS	100.0	30.0
Oil and Grease	20.0	15.0

TSS effluent limits (50 mg/L) for coal pile runoff in Part 423.12(b)(9) do not apply to this facility because coal (coke) is stored in a building and is not subject to precipitation runoff events.

Total residual chlorine (TRC) effluent limits (0.5 mg/L) in Part 423(b)(6) and (7) do not apply to this facility because, as described in Section II, YELP does not use a cooling tower to cool the main condenser, which would result in a discharge of cooling water and cooling tower blow down; it uses air to cool the main condenser.

C. Nondegradation Load Allocations

The provisions of ARM 17.30.701, *et seq.* (Nondegradation of Water Quality) apply to new or increased sources of pollution [ARM 17.30.702(18)]. Sources that are in compliance with the conditions of their permit and do not exceed the limits established in the existing permit, or as determined from a permit previously issued by the Department, are not considered new or increased sources. Based on this analysis, the discharge does not constitute a new or increased source for the purposes of Montana Nondegradation requirements because there are no changes in effluent volume, quality or production rates.

IV. Rationale for Proposed Water Quality-based Effluent Limits

A. Scope and Authority

Permits are required to include WQBELs when TBELs are not adequate to protect state water quality standards (40 CFR 122.44 and ARM 17.30.1344). ARM 17.30.637(2) states that no wastes may be discharged that can reasonably be expected to violate any state water quality standard. Montana water quality standards (ARM 17.30.601, *et seq.*) define both water use classifications for all state waters and numeric and narrative standards that protect those designated uses. New sources, as defined in ARM 17.30.703(16), are subject to Montana Nondegradation Policy [75-5-303, Montana Code Annotated (MCA)] and regulations (ARM 17.30.701, *et. seq.*).

B. Receiving Water

The Exxon storm water ditch is the receiving water for treated wastewater discharged from YELP (see Figure 2). Water in the Exxon storm water ditch flows west along Exxon's south property boundary for about ¼ mile and then northward along the west perimeter of the Exxon tank farm before it enters a side channel of the Yellowstone River across from Cherry Island. YELP discharges from a four-inch overhead pipe to the storm water ditch. The Exxon storm water ditch flows year-round due to springs and/or ground water seepage into the ditch (Tracey I. Anderson, ExxonMobil Environmental Coordinator, Inspection March 8, 2007). Exxon is permitted to discharge to this ditch under the General Permit for Storm Water Discharges Associated With Industrial Activity (MTR0000104). The storm water ditch also receives overflow from the Coulson Irrigation Ditch at the southwest corner of the Exxon tank farm.

The water use classification for the Exxon storm water ditch in this part of the Yellowstone River drainage is C-3, which is a change from the existing permit. The Yellowstone River at Outfall 001 was classified as B-3 [Administrative Rules of Montana (ARM) 17.30.611(1)(c)(i)] in the previous permit because the discharge was mistakenly assumed to be to the Yellowstone River instead of the Exxon storm water ditch which is fed by springs and irrigation overflow water and meets the definition of state water [75-5-103(29)(a)]. Waters classified C-3 are to be maintained suitable for bathing, swimming and recreation; growth and propagation of non-salmonid fishes and associated aquatic life, waterfowl and furbearers. The quality of these waters is naturally marginal for drinking, culinary, and food processing purposes, agriculture, and industrial water supply. Degradation that will impact established beneficial uses are not allowed.

The United States Geological Service (USGS) collects flow data for the Yellowstone River at gauging station number 06214500 located on the right bank of the river 0.3 miles downstream from the U.S. Highway 87 bridge. The bridge is located about ½-mile upstream from the Billings WWTP. The 7Q10 flow at this station is 1,110 cubic feet per second (cfs). In the existing permit, 1,110 cfs was used to calculate the mixing zone in the permit instead of the flow rate in the Exxon storm water ditch. No flow or sample data exists for the Exxon storm water ditch.

The drainage basin is identified as USGS Hydrologic Unit Code (HUC) 10070007. The Exxon storm water ditch is not listed on the 1996 and 2006 303(d) list of impaired streams.

C. Applicable Water Quality Standards

Discharges to surface waters classified C-3 are subject to the specific water quality standards of ARM 17.30.629 (March 2006), Department Circular DEQ-7 (February 2006), as well as the general provision of ARM 17.30.635 through 637. In addition to these standards, dischargers are also subject to ARM 17.30 Subchapter 5 (Mixing Zones, November 2004) and Subchapter 7 (Nondegradation of Water Quality, June 2004).

ARM 17.30.635(4) requires that the design condition for disposal systems must be based on the 7-day average flow of the receiving water which is expected to occur on average once in 10-years (7Q10).

D. Mixing Zone

A mixing zone is an area where the effluent mixes with the receiving water and certain water quality standards may be exceeded [ARM 17.30.502(6)]. The Department must determine the applicability of currently granted mixing zones [ARM 17.30.505(1)]. Mixing zones allowed under a permit issued prior to April 29, 1993 will remain in effect unless there is evidence that previously allowed mixing zones will impair existing or anticipated uses [ARM 17.30.505(1)(c)].

In accordance with ARM 17.30.517(1)(b), acute water quality standards for aquatic life may not be exceeded in any portion of the mixing zone unless the Department finds that allowing minimal initial dilution will not threaten or impair existing uses. The discharge must also comply with the general prohibitions of ARM 17.30.637(1) which require that state waters, including mixing zones, must be free from substances which will:

- (a) settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines;
- (b) create floating debris, scum, a visible oil film (or be present in concentrations at or in excess of 10 milligrams per liter) or globules of grease or other floating materials;
- (c) produce odors, colors or other conditions as to which create a nuisance or render undesirable tastes to fish flesh or make fish inedible;
- (d) create concentrations or combinations of materials which are toxic or harmful to human, animal, plant or aquatic life; and
- (e) create conditions which produce undesirable aquatic life.

Although certain standards may be exceeded in the mixing zone, an effluent in its mixing zone may not block passage of aquatic organisms nor may it cause acutely toxic conditions [ARM 17.30.602(16)]. No mixing zone will be granted that will impair beneficial uses [ARM 17.30.506(1)]. Acute standards may not be exceeded in any part of the mixing zone [ARM 17.30.507(1)(b)]. Aquatic life chronic, aquatic life acute and human health standards may not be exceeded outside of the mixing zone [ARM 17.30.507(1)(a)].

A standard mixing zone may be granted for facilities which discharge less than 1 million gallons per day (MGD) or when mixing is nearly instantaneous [ARM 17.30.516(d)]. Nearly instantaneous mixing is assumed if the discharge is through an effluent diffuser, when the mean daily flow exceeds the 7-day, 10-year low flow (dilution ratio <1) or the permittee demonstrates through a Department approved study plan that the discharge is nearly instantaneous. A nearly instantaneous mixing zone may not extend downstream more than two (2) river widths. Effluent discharges which do not qualify for a standard mixing zone must apply for a source specific mixing zone in accordance with ARM

17.30.518 and must conform to the requirements of 75-5-301(4), MCA which states that mixing zones must be the smallest practicable size; have minimal effects on uses; and, have definable boundaries. ARM 17.30.515(2) states that a person applying for a mixing zone must indicate the type of mixing zone and provide sufficient detail for the Department to make a determination regarding the authorization of the mixing zone under the rules of Subchapter 5.

A mixing zone is an area where the effluent mixes with the receiving water and certain water quality standards may be exceeded [ARM 17.30.502(6)]. The Department must determine the applicability of currently granted mixing zones [ARM 17.30.505(1)]. Mixing zones allowed under a permit issued prior to April 29, 1993 will remain in effect unless there is evidence that previously allowed mixing zones will impair existing or anticipated uses [ARM 17.30.505(1)(c)].

Best Professional Judgment was used to define the mixing zone in the previous permit because there were no available field data. The mixing zone was defined as “consisting of 1,000 feet of Yellowstone River channel below the discharge”. There is no basis in the previous SOB for this mixing zone because the Yellowstone River is not the receiving water for discharge; it is the Exxon storm water ditch. Therefore, the mixing zone in the previous permit is inappropriate for this discharge.

Some mixing of the discharge with the receiving water is likely because the four-inch overhead PVC pipe discharges four feet above the center of the Exxon storm water ditch. Dilution with downstream water (Yellowstone River) is not appropriate or authorized by rule or statute which state that a mixing zone must be the smallest practicable size [75-5-301(4), MCA]. No water quality-based effluent limits that use a mixing zone are included in this permit therefore no mixing zone will be defined in this permit.

E. Basis and Calculations for WQBEL (Reasonable Potential)

Effluent limits are required for all pollutants which demonstrate a reasonable potential to exceed numeric or narrative standards. The Department uses a mass balance equation to determine reasonable potential based on *EPA Technical Support Document for Water Quality-based Toxics Control (TSD)* (EPA/505/2-90-001). Input parameters are based on receiving water concentration; maximum projected effluent concentration and design flow of the wastewater treatment facility, and the applicable receiving water flow.

No flow or pollutant data are available for the Exxon storm water ditch. Therefore, reasonable potential to exceed numeric standards cannot be assessed for this permit.

1. Conventional Pollutants

Total Suspended Solids (TSS)- TBELs for TSS in Part III of this SOB are sufficient to control suspended solids in the discharge. The TBELs are consistent with other industrial discharges nearby (PPL Montana Corette Steam Electric Power Plant and Montana

Sulphur and Chemical Company). TSS TBELs will apply to the YELP discharge. No additional WQBEL are required for this parameter.

Oil and Grease – TBELs for Oil and Grease (20 mg/L instantaneous maximum and 15 mg/L daily average) in Part III of this SOB are insufficient to protect water quality. The water quality-based effluent limit for Oil and Grease at ARM 17.30.637(1)(b) is more restrictive than the ELG and will apply to the discharge. The instantaneous maximum limit for Oil and Grease is 10 mg/L.

2. Non-conventional Pollutants

Phosphorus - There is insufficient phosphorus effluent data available to determine the concentration of phosphorus in the discharge due to boiler additives and whether phosphorus may impact water quality in the Exxon storm water ditch or Yellowstone River. Increased monitoring requirements in this permit will collect the necessary data to evaluate these potential pollutants during the next permit cycle.

3. Toxic Pollutants

Total Residual Chlorine (TRC) - The permittee has proposed to occasionally use Lockwood municipal water during the summer months to supplement YELP's supplied water. There is no TRC limit in the existing permit. The following water-quality-based effluent limits will apply to the discharge during the weeks when Lockwood municipal water is used to supplement YELP's supplied water: acute water quality standard for TRC is 0.019 mg/L; the chronic water quality standard for TRC is 0.011 mg/L. These limits apply at the end of the discharge pipe before the wastewater enters the Exxon storm water drain.

Analytical methods in 40 CFR Part 136 requires chlorine samples to be analyzed immediately. On-site sampling for total residual chlorine with a chlorine meter using an approved method (Part 136) is required. The method must achieve a minimum detection level of 0.1 mg/L. Sampling of effluent with analytical results less than 0.1 mg/L is considered in compliance with the chlorine limit.

Total Recoverable Metals - There is insufficient total recoverable metals effluent data available to determine if water quality standards in the Exxon storm water ditch are exceeded for these parameters. Increased monitoring requirements in this permit will collect the necessary data to evaluate these potential pollutants during the next permit cycle.

V. Proposed Effluent Limits

A. Outfall 001

Table 3. Proposed Effluent Limits – Outfall 001

Parameter	Units	Average Monthly Limit ¹	Maximum Daily Limit ¹
Total Suspended Solids	mg/L	30	100
Oil and Grease ²	mg/L	--	10
Total Residual Chlorine ³	mg/L	0.011	0.019
Footnotes: 1. See Definition section at end of permit for explanation of terms. 2. If a visual examination of the discharge indicates the presence of hydrocarbons, by film, odor or other sign, the permittee is required to sample for Oil and Grease using EPA Method 1664A. 3. Effective during the weeks when Lockwood municipal water is used in the plant. Sampling of effluent with analytical results less than 0.1 mg/L is considered in compliance with the chlorine limit.			

Effluent pH shall remain between 6.0 and 9.0. For compliance purposes, any single analysis and/or measurement beyond this limitation shall be considered a violation of the conditions of this permit [ARM 17.30 647(2)(c)].

There shall be no discharge which causes visible oil sheen in the receiving water [ARM 17.30 647(1)(b)].

There shall be no discharge of floating solids or visible foam in other than trace amounts [ARM 17.30.637(1)(b)].

There shall be no discharge of polychlorinated biphenyl compounds from transformer fluid or any other source [40 CFR Part 423.12(b)(2)].

VI. Monitoring Requirements

A. Effluent Monitoring

Monitoring of the effluent must be representative of the discharge. The effluent sample is obtained at the sample tap in the wastewater storage tank room before discharge to the Exxon storm drain.

Monitoring Requirements				
Parameter	Unit	Monitoring Location	Frequency of Analyses	Sample Type ¹
Flow	gpm	Effluent	Continuous	Instantaneous
Total Suspended Solids	mg/L	Effluent	1/Week	Grab
pH	s.u.	Effluent	1/Week	Instantaneous
Total Residual Chlorine ²	mg/L	Effluent	Daily	Grab
Total Dissolved Solids	mg/L	Effluent	1/Week	Grab
Phosphorus	mg/L	Effluent	1/Quarter	Grab
Total Recoverable Copper	mg/L	Effluent	1/Quarter	Grab
Total Recoverable Zinc	mg/L	Effluent	1/Quarter	Grab
Oil and Grease ³	mg/L	Effluent	1/Week	Grab
Footnotes: 1. See Definition section at end of permit for explanation of terms. 2 Effective during the weeks when Lockwood municipal water is used in the plant. Sampling of effluent with analytical results less than 0.1 mg/L is considered in compliance with the chlorine limit. 3. If a visual examination of the discharge indicates the presence of hydrocarbons, by film, odor or other sign, the permittee is required to sample for Oil and Grease using EPA Method 1664A.				

B. Additional Reporting Requirements

Analytical methods in 40 CFR Part 136 requires TRC samples to be analyzed immediately. On-site sampling for TRC with a chlorine meter using an approved method is required. The method must achieve a minimum detection level of 0.1 mg/L. Effluent samples with analytical results less than 0.1 mg/L are considered in compliance with the TRC limit.

VII. Nonsignificance Determination

The discharge from YELP does not constitute a new or increased source of pollutants pursuant to ARM 17.30.702(18) and the discharge is not significant.

VIII. Special Conditions/Compliance Schedules

None

IX. Other Information

On September 21, 2000, a U.S. District Judge issued an order stating that until all necessary total maximum daily loads (TMDLs) under Section 303(d) of the Clean Water Act are established for a particular water quality limited segment (WQLS), the State is not to issue any new or increased permits under the MPDES program. The order was issued in the lawsuit Friends of the Wild Swan v. U.S. EPA, et al. (CV 97-35-M-DWM), District of Montana and Missoula Division. The DEQ finds that renewal of this permit does not

conflict with the order because there are no new or increased sources associated with the discharge.

X. Information Sources

ARM Title 17, Chapter 30, Subchapter 5 - Mixing Zones in Surface and Ground Water. November 2004.

ARM Title 17, Chapter 30, Subchapter 6 - Surface Water Quality Standards. March 31, 2006.

ARM Title 17, Chapter 30, Subchapter 7 - Nondegradation of Water Quality. June 30, 2004.

ARM Title 17, Chapter 30, Subchapter 13 - Montana Pollutant Discharge Elimination System (MPDES) Standards. March 31, 2003.

40 CFR, Parts 122, 133, 136, July 1, 2004.

40 CFR, Part 423 Steam Electric Power Generating Point Source Category. 2006

DEQ. Circular WQB-7, Montana Numeric Water Quality Standards. February 2006.

DEQ. Montana List of Water bodies in Need of Total Maximum Daily Load Development. 1996.

DEQ. Montana 303(d) List. A Compilation of Impaired and Threatened Water bodies in Need of Water Quality Restoration. Part A. Water Quality Assessment Results. November 24, 2006.

EPA. Office of Water, U.S. EPA NPDES Permit Writers' Manual, EPA-833-B-96-003. December 1996.

EPA. Technical Support Document for Water Quality based Toxics Control EPA/505/2-90-001. March 1991.

Letter from Rosebud Operating Services, Inc. to the Department clarifying cooling tower condenser and small recirculating house service water system discharges. November 1995.

Prepared by: John Wadhams
Date: September 2007/April 2008

Figure 1

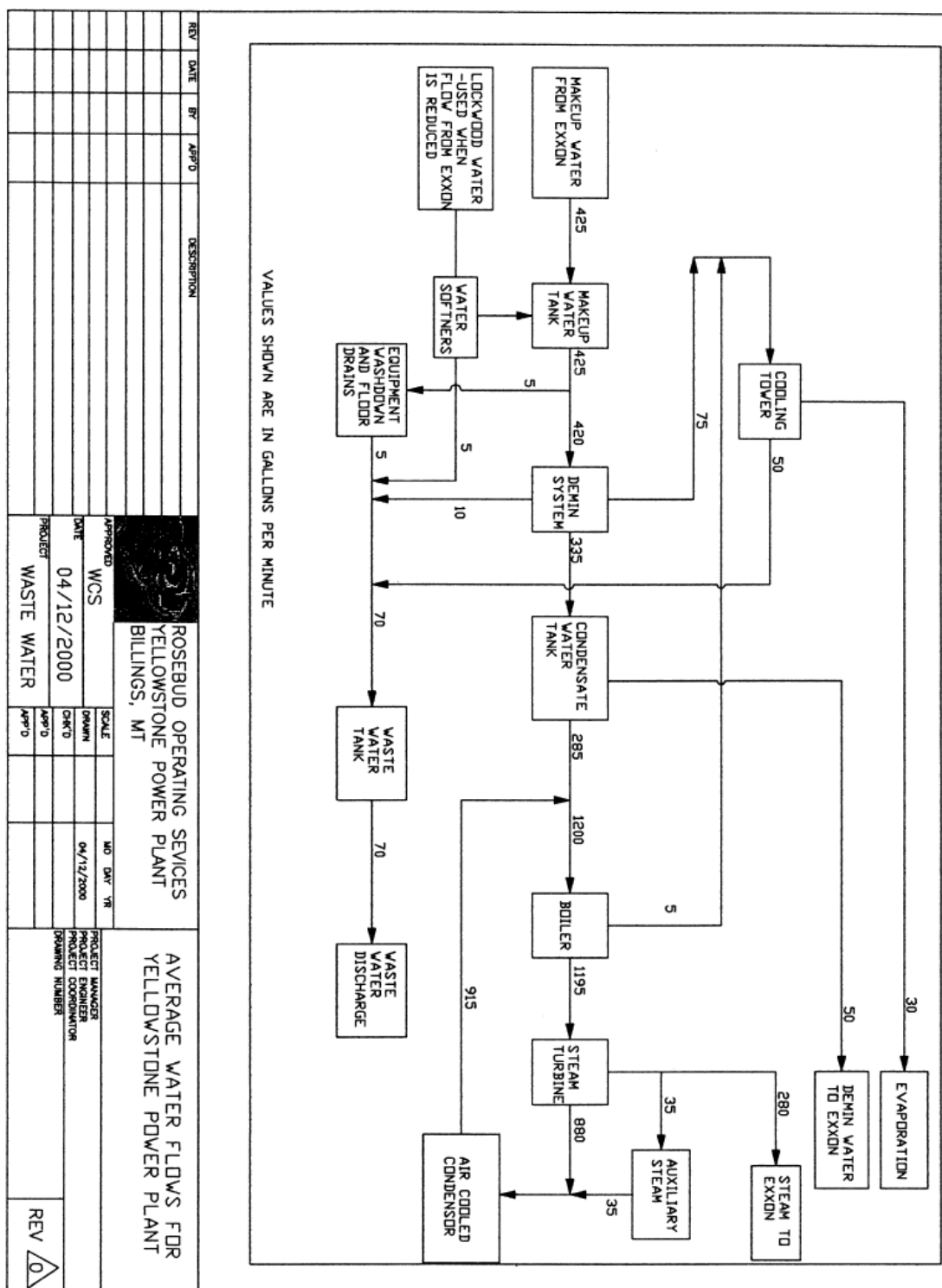
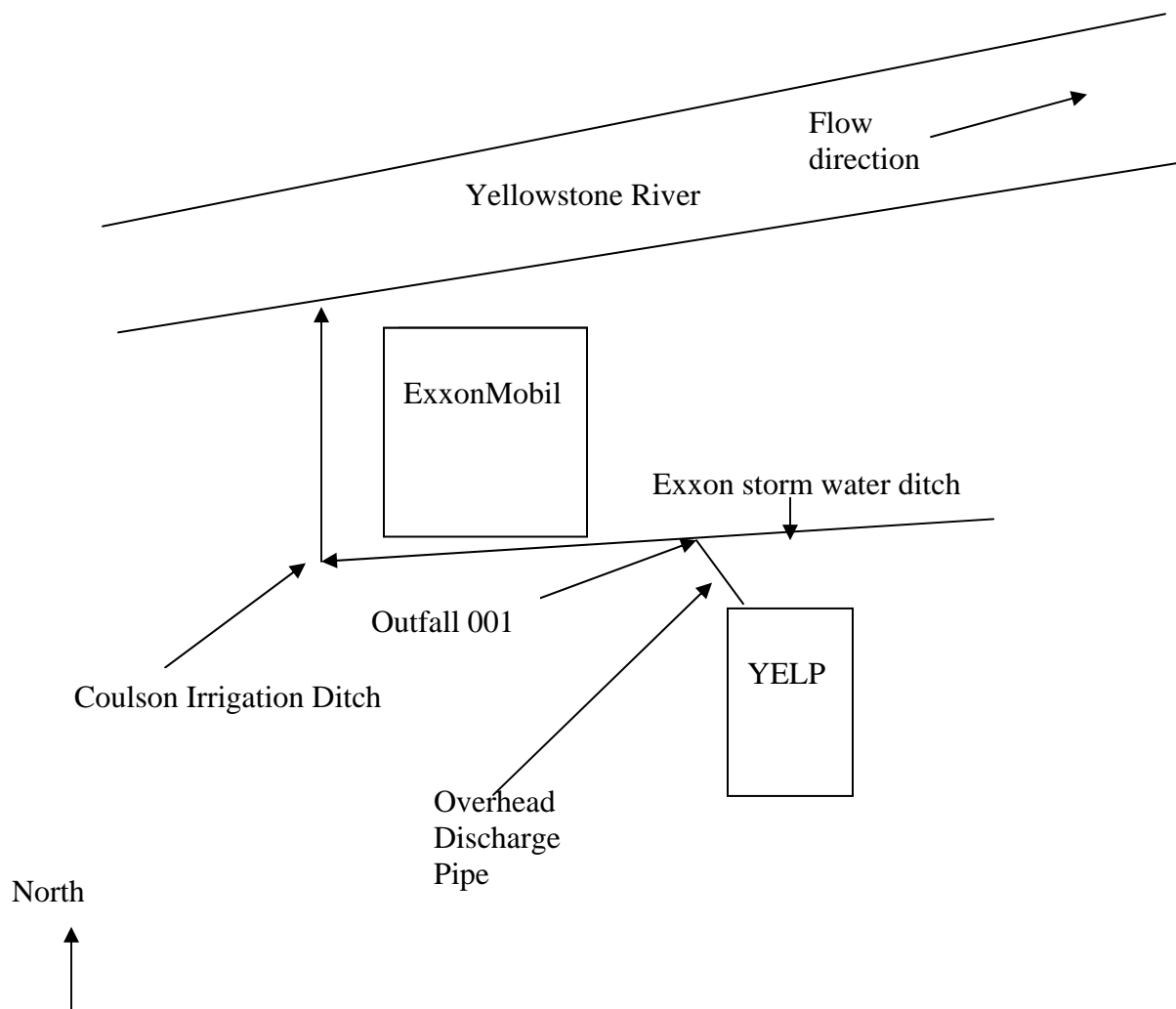


Figure 2
Discharge Location



The effluent sample is obtained from the sample tap in the wastewater tank storage room before discharge to the Exxon storm water ditch